REMARKS

Reconsideration of the pending application is respectfully requested in view of the foregoing amendments and the following remarks.

Status of the Application

Claims 1, 3-9, 13 and 15-21 are currently pending. Of these, claim 5 is amended, and claims 17-21 are withdrawn. No new matter has been introduced into this application by way of the amendment.

Summary of the Office Action

The Office Action opens by entering a restriction requirement relative to claims 17-21, and has withdrawn those claims as being directed to a non-elected invention pursuant to 37 CFR 1.142(b).

The specification is objected to because of an allegedly erroneous reference to fig. 6 at page 16, line 1.

Claim 5 is objected to under 37 CFR 1.75(a) as allegedly failing to particularly point our and distinctly claim the subject matter applicant regards as the invention. Specifically, the recitation of "said curvature" is allegedly unclear.

Claims 1, 3, 8, 13, 15 and 16 are rejected under 35 U.S.C. § 103(a) as being obvious over Chang et al. in view of U.S. Patent 5,970,182 (Goris).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being obvious over Chang et al. and Goris, and further in view of Kawata et al.

Claim 4 is rejected under 35 U.S.C. § 103(a) as being obvious over Chang et al. and Goris, and further in view of Kawata et al. and U.S. Published Patent Application 2003/0215119 (Uppaluri).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being obvious over Chang et al. and Goris, and further in view of Kawata et al. and U.S. Patent 5,572,565 (Abdel-Mottaleb).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being obvious over Chang et al. and Goris, and further in view of Pietka.

All other grounds of rejection set forth in the prior Office Action have been overcome.

Discussion

Applicants respectfully request reconsideration of the pending application in view of the foregoing amendments and the following remarks.

At the outset, Applicants have amended the specification and claim 5 in order to address the objections. Withdrawal of the objections is respectfully requested.

Applicants also traverse the restriction requirement entered in this Office Action against claims 17-21. There are two criteria for a proper requirement for restriction between patentably distinct inventions: (i) the inventions must be independent or distinct as claimed, and (ii) there must be a serious burden on the Examiner if restriction is not required. M.P.E.P. § 803. Consequently, as set forth in M.P.E.P. § 803: "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions." In the case at hand, the Office Action has failed to meet the criteria for a proper restriction requirement by not even so much as asserting that there would be a serious burden on the Examiner if restriction were not required.

In addition, even if related inventions are shown to be distinct under the criteria of M.P.E.P. § 806.05 (c)-(i), "the examiner, in order to establish reasons for insisting upon restriction, must show by appropriate explanation one of the following: (1) separate classification thereof ... (2) a separate status in the art when they are classifiable together ... (3) a different field of search." M.P.E.P. § 808.02. Here, the Office Action has failed to show by appropriate explanation separate classification, separate status in the art when classifiable together, or a different field of search.

In addition, claims 18 and 19 are dependent on claim 6, the latter not being subject to the restriction. Thus, at a minimum, the restriction relative to claims 18 and 19 should be withdrawn, while the facts support withdrawal of the restriction requirement relative to each of claims 17-21.

Turning to the substantive rejections, the Office Action asserts that Chang discloses a method of determining the orientation of an image but does not disclose that the orientation is determined from the direction and magnitude of normal vectors associated with local curvature in a set of points. *See Office Action, p. 5.* This lack of disclosure is allegedly overcome by Goris, this reference purportedly teaching a method of determining the orientation of an image comprising determining the orientation from direction and magnitude of normal vectors associated with local curvature in a set of points. *Id.*

Applicants respectfully disagree with the foregoing analysis for the following reasons.

Goris teaches a method of registering two images. This registering is controlled by a particular method of measuring distance, namely measuring a distance between two points which incorporates curvature information. This method is said to provide a better matching of points relative to the results provided when using a method based on standard three-dimensional Euclidean distance measurement. *See, e.g., Goris, col. 7, lines 33-47.*

However, Goris fails to teach a method of determining the orientation of an image, and more specifically how one might determine the orientation of an image from the direction and magnitude of normal vectors associated with local curvature in a set of points associated with a digital representation of said image. The teaching of Goris is instead limited to using normal vectors to obtain a distance measurement wherein there is already incorporated therein such orientation and curvature information. Nowhere in Goris is there any teaching as to how orientation of an image may be determined from the direction and magnitude of normal vectors associated with local curvature in a set of points associated with a digital representation of said image.

Thus, even if one assumes *arguendo* that the combination of Chang and Goris is proper, the alleged combination fails to provide the invention as claimed, as Goris is limited to using normal vectors to obtain a distance measurement wherein there is already incorporated therein such orientation and curvature information. Again, nowhere in Goris (or Chang) is there any teaching as to how orientation of an image may be determined from the direction and magnitude of normal vectors associated with local curvature in a set of points associated with a digital representation of said image.

As all of the pending claims are rejected at least in part over the alleged combination of Chang and Goris, and the secondary references fail to provide the teaching shown to be absent in this alleged combination, Applicants respectfully request withdrawal of the various obviousness rejections entered against the pending claims.

Conclusion

As Applicants believes the application is in proper condition for allowance, the examiner is respectfully requested to pass the application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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